1 Conjunto de datos

1. **BAO**: BAO-BOSS-DR12, 6 puntos[1]
   - Nombre del likelihood: `bao_boss_dr12`

z	distance-type	value
0.38	dM(rsfid/rs)	1512.39
0.38	Hz(rs/rsfid)	81.2087
0.51	dM(rsfid/rs)	1975.22
0.51	Hz(rs/rsfid)	90.9029
0.61	dM(rsfid/rs)	2306.68
0.61	Hz(rs/rsfid)	98.9647

2. **Supernovas**: SDSS-II Joint Light-curve Analysis (JLA), 740 puntos[2]
   - Nombre del likelihood: `JLA`
   - Se fijaron los valores de los *nuisance parameters* de acuerdo con [arXiv:1401.4064v2, tabla 15, fila 1]

   - $\alpha = 0.141$
   - $\beta = 3.099$
   - M = -19.09
   - ΔM = -0.070

3. **CMB**: Planck TT + lowP (2015), [NUMERO DE DATOS?]
   - Nombre de los likelihoods: `Planck_highl, Planck_lowl`
   - low-$\ell = \{\ell = 2, \ell = 29\}$, high-$\ell = \{\ell = 30, \ell = 2508\}$
   - Se fijaron los valores de los *nuisance parameters* de acuerdo con el archivo de montepython `base2015.param`

```
data.parameters['A_cib_217']          = [     61,     0,  200,     0,     1,'nuisance']
data.parameters['cib_index']          = [   -1.3, -1.3, -1.3,     0,     1,'nuisance']
data.parameters['xi_sz_cib']          = [   0.13,     0,    1,     0,     1,'nuisance']
data.parameters['A_sz']               = [   6.86,     0,   10,     0,     1,'nuisance']
data.parameters['ps_A_100_100']       = [  222.9,     0,  400,     0,     1,'nuisance']
data.parameters['ps_A_143_143']       = [     38,     0,  400,     0,     1,'nuisance']
data.parameters['ps_A_143_217']       = [   35.2,     0,  400,     0,     1,'nuisance']
data.parameters['ps_A_217_217']       = [  102.6,     0,  400,     0,     1,'nuisance']
data.parameters['ksz_norm']           = [      0,     0,   10,     0,     1,'nuisance']
data.parameters['gal545_A_100']       = [   6.75,     0,   50,     0,     1,'nuisance']
data.parameters['gal545_A_143']       = [   9.41,     0,   50,     0,     1,'nuisance']
data.parameters['gal545_A_143_217']   = [  19.28,     0,  100,     0,     1,'nuisance']
data.parameters['gal545_A_217']       = [   81.7,     0,  400,     0,     1,'nuisance']
data.parameters['calib_100T']         = [ 998.59,     0, 3000,     0, 0.001,'nuisance']
data.parameters['calib_217T']         = [ 995.89,     0, 3000,     0, 0.001,'nuisance']
data.parameters['A_planck']           = [100.028,    90,  110,     0,  0.01,'nuisance']
```

Figure 1: [mean, min, max, 1-sigma, scale, 'role']

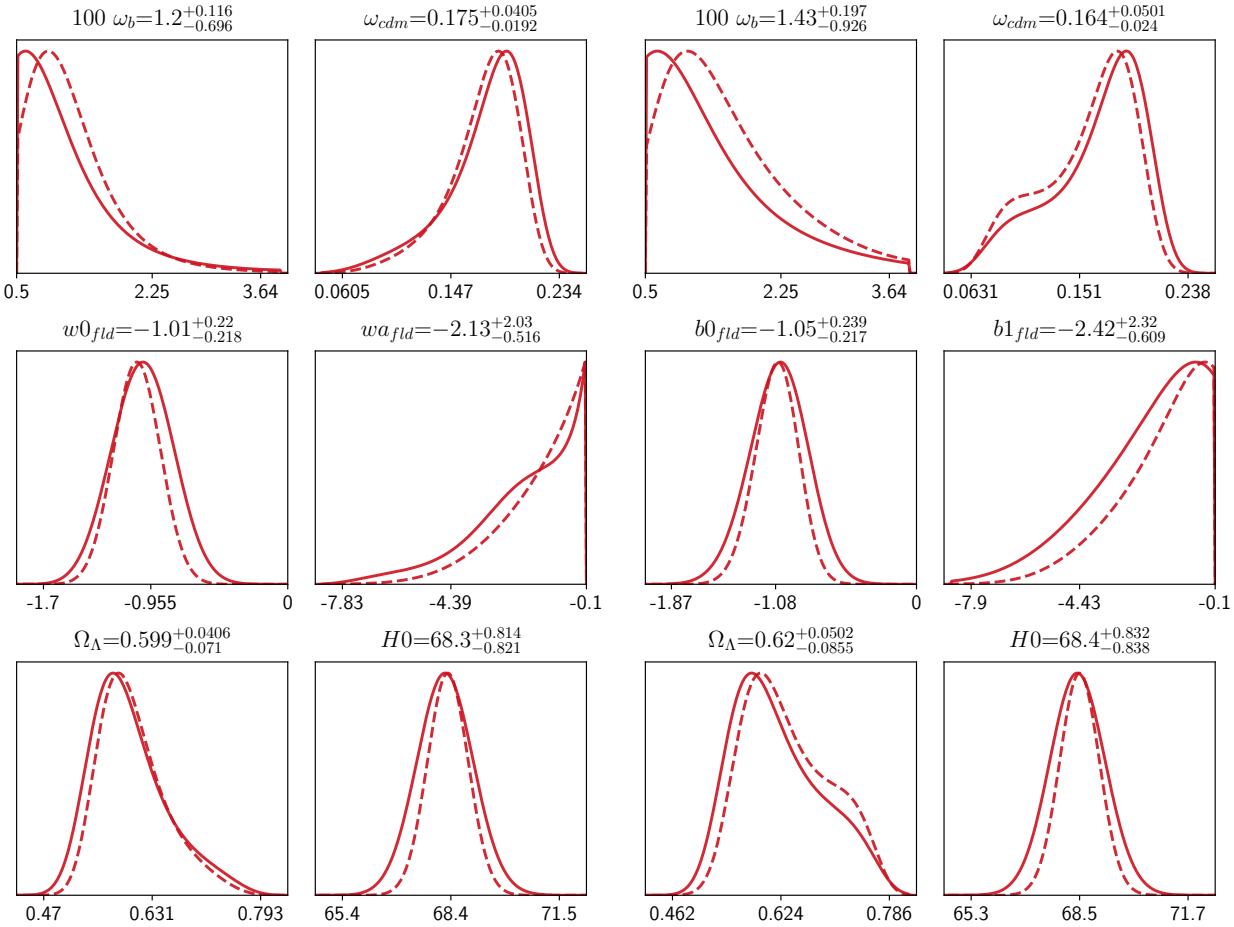
2 Comparación de dos parametrizaciones 2-dim (a, b) equivalentes

2.1 CPL

Param	best-fit	mean $\pm\sigma$	Marginal Limits 68% lower	68% upper	95% lower	95% upper
100 ω_b	1.625	$1.196^{+0.12}_{-0.7}$	0.50	1.3120	0.5	2.551
ω_{cdm}	0.1488	$0.1751^{+0.04}_{-0.019}$	0.15583	0.21553	0.1021	0.2301
$w0_{fld}$	-1.102	$-1.011^{+0.22}_{-0.22}$	-1.229	-7.91	-1.441	-0.5831
wa_{fld}	-0.1441	$-2.133^{+2}_{-0.52}$	-0.26492	-0.1	-5.487	-0.1
Ω_Λ	0.6483	$0.5989^{+0.041}_{-0.071}$	0.12593	0.52793	0.4944	0.7248
$H0$	68.5	$68.29^{+0.81}_{-0.82}$	67.46	69.10	66.67	69.93

$-\ln \mathcal{L}_{\min} = 343.001$, minimum $\chi^2 = 686$

[1] revisar el archivo `montepython3-1/data/BAO_consensus_results_dM_Hz.txt`
[2] revisar el archivo `montepython3-1/data/JLA/jla_lcparams.txt`



(a) CPL (b) w(N=1)

2.2 w(N=1)

Param	best-fit	mean $\pm\sigma$	Marginal Limits 68% lower	68% upper	95% lower	95% upper
100 ω_b	2.589	$1.426^{+0.2}_{-0.93}$	0.5	1.6226	0.5	3.093
ω_{cdm}	0.1063	$0.1638^{+0.05}_{-0.024}$	0.13981	0.21387	0.0823	0.2273
$b0_{fld}$	−1.042	$-1.055^{+0.24}_{-0.22}$	−1.2717	−0.81614	−1.515	−0.6057
$b1_{fld}$	−0.2704	$-2.418^{+2.3}_{-0.61}$	−3.0262	−0.1	−5.878	−0.1
Ω_Λ	0.7194	$0.6196^{+0.05}_{-0.085}$	0.53413	0.66982	0.5039	0.759
$H0$	68.65	$68.42^{+0.83}_{-0.84}$	67.587	69.256	66.76	70.1

$-\ln\mathcal{L}_{\min} = 342.922$, minimum $\chi^2 = 685.8$

3 Resultados BAO+JLA vs Planck+BAO+JLA

3.1 w(N=1)

- BAO+JLA, 1.2m de pasos, 8 procesos, convergencia de todos los parámetros
- Planck+BAO+JLA, 950k pasos, 8 procesos, convergencia de todos los parámetros

Param	best-fit	mean$\pm\sigma$	95% lower	95% upper
$100\ \omega_b$	2.589	$1.426^{+0.2}_{-0.93}$	0.5	3.093
ω_{cdm}	0.1063	$0.1638^{+0.05}_{-0.024}$	0.0823	0.2273
$b0_{fld}$	−1.042	$-1.055^{+0.24}_{-0.22}$	−1.515	−0.6057
$b1_{fld}$	−0.2704	$-2.418^{+2.3}_{-0.61}$	−5.878	−0.1
Ω_Λ	0.7194	$0.6196^{+0.05}_{-0.085}$	0.5039	0.759
$H0$	68.65	$68.42^{+0.83}_{-0.84}$	66.76	70.1

$-\ln\mathcal{L}_{\min} = 342.922$, minimum $\chi^2 = 685.8$

Param	best-fit	mean$\pm\sigma$	95% lower	95% upper
$100\ \omega_b$	2.238	$2.238^{+0.018}_{-0.018}$	2.202	2.275
ω_{cdm}	0.1191	$0.1192^{+0.0019}_{-0.0019}$	0.1155	0.1231
$10^{+9}A_s$	2.264	$2.245^{+0.075}_{-0.079}$	2.091	2.401
n_s	0.9697	$0.9699^{+0.0048}_{-0.0049}$	0.9603	0.9795
τ_{reio}	0.09225	$0.08777^{+0.018}_{-0.018}$	0.05146	0.1236
$b0_{fld}$	−0.9266	$-0.9242^{+0.12}_{-0.13}$	−1.17	−0.6762
$b1_{fld}$	−1.28	$-1.331^{+0.39}_{-0.29}$	−2.05	−0.6609
Ω_Λ	0.6961	$0.6968^{+0.0083}_{-0.0079}$	0.6805	0.7129
z_{reio}	11.19	$10.75^{+1.7}_{-1.5}$	7.565	13.87
$H0$	68.24	$68.35^{+0.77}_{-0.79}$	66.81	69.93
$\sigma8$	0.8471	$0.8453^{+0.019}_{-0.019}$	0.808	0.8823

$-\ln\mathcal{L}_{\min} = 5987.82$, minimum $\chi^2 = 1.198e+04$

3.2 w(N=2)

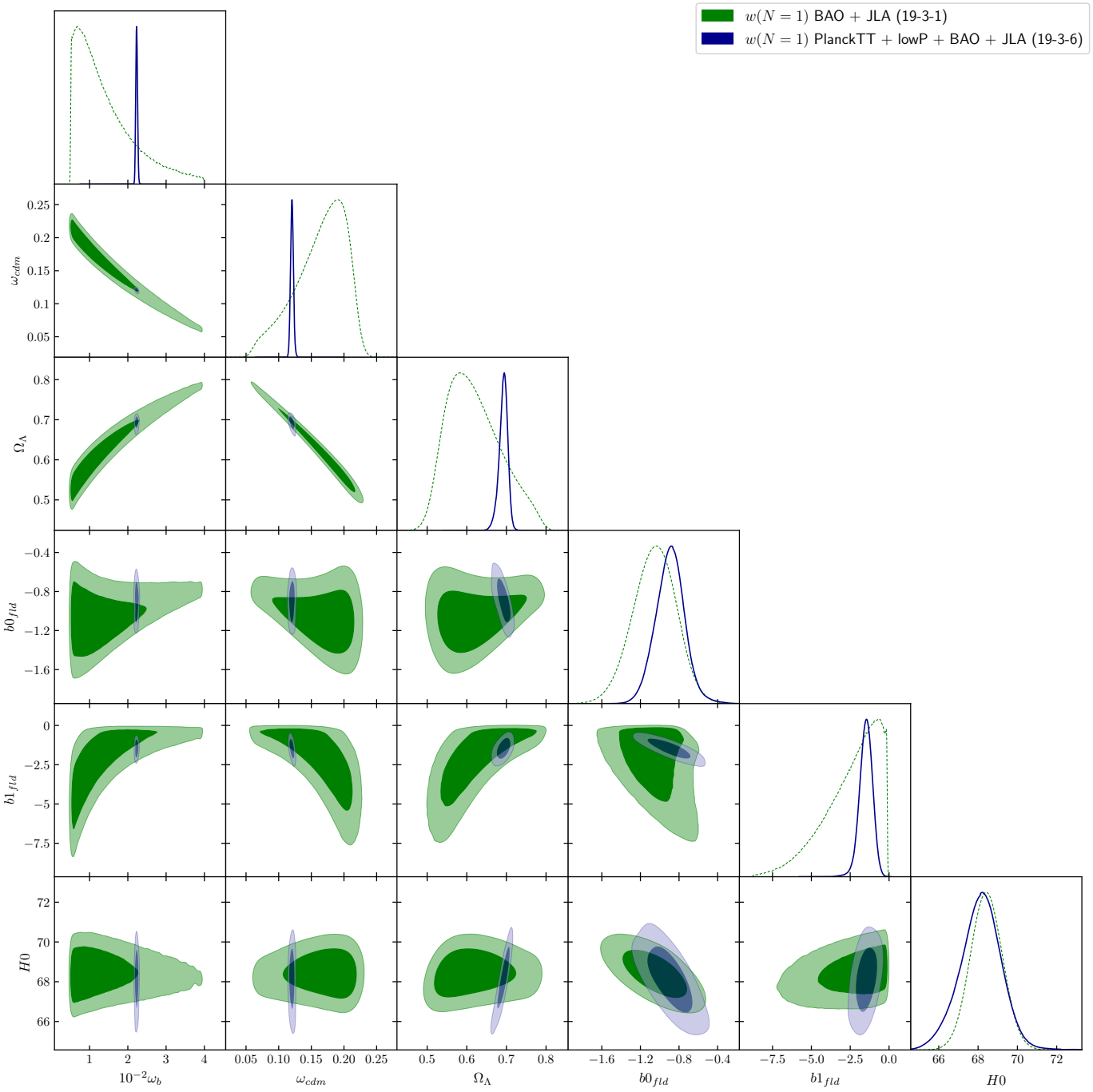
- BAO+JLA, 1.2m de pasos, 8 procesos, convergencia de todos los parámetros
- Planck+BAO+JLA, 1m de pasos, 6 procesos, convergencia parcial

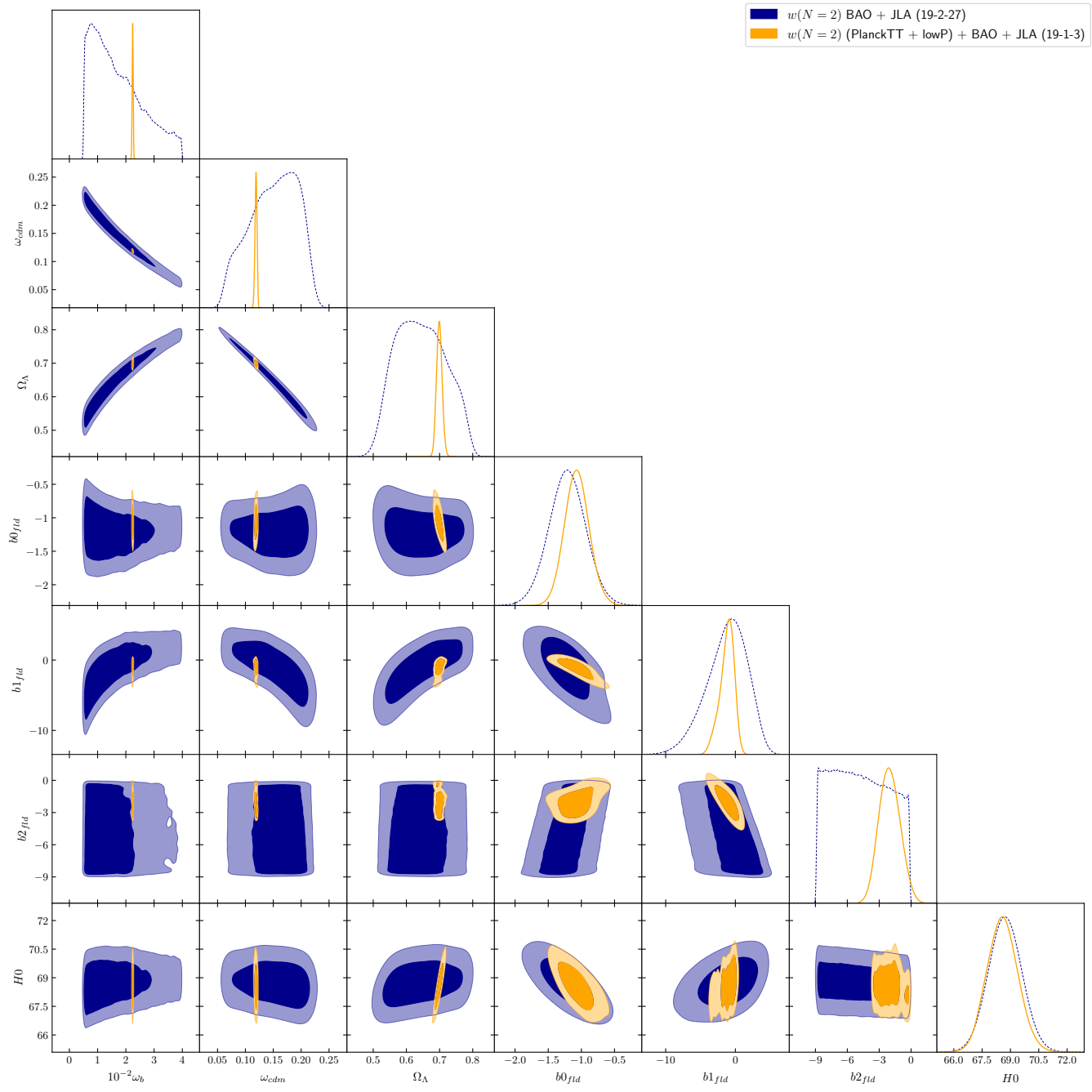
Param	best-fit	mean$\pm\sigma$	95% lower	95% upper
$100\ \omega_b$	3.946	$1.675^{+0.31}_{-1.2}$	0.5	3.528
ω_{cdm}	0.06009	$0.1528^{+0.058}_{-0.031}$	0.06814	0.2216
$b0_{fld}$	−1.136	$-1.209^{+0.28}_{-0.28}$	−1.785	−0.633
$b1_{fld}$	1.845	$-1.404^{+3.5}_{-2.5}$	−7.434	4.162
$b2_{fld}$	−4.629	$-4.69^{+1.9}_{-3.9}$	−8.793	−0.3901
Ω_Λ	0.79	$0.6403^{+0.063}_{-0.097}$	0.5151	0.7834
$H0$	68.85	$68.71^{+0.91}_{-0.91}$	66.88	70.53

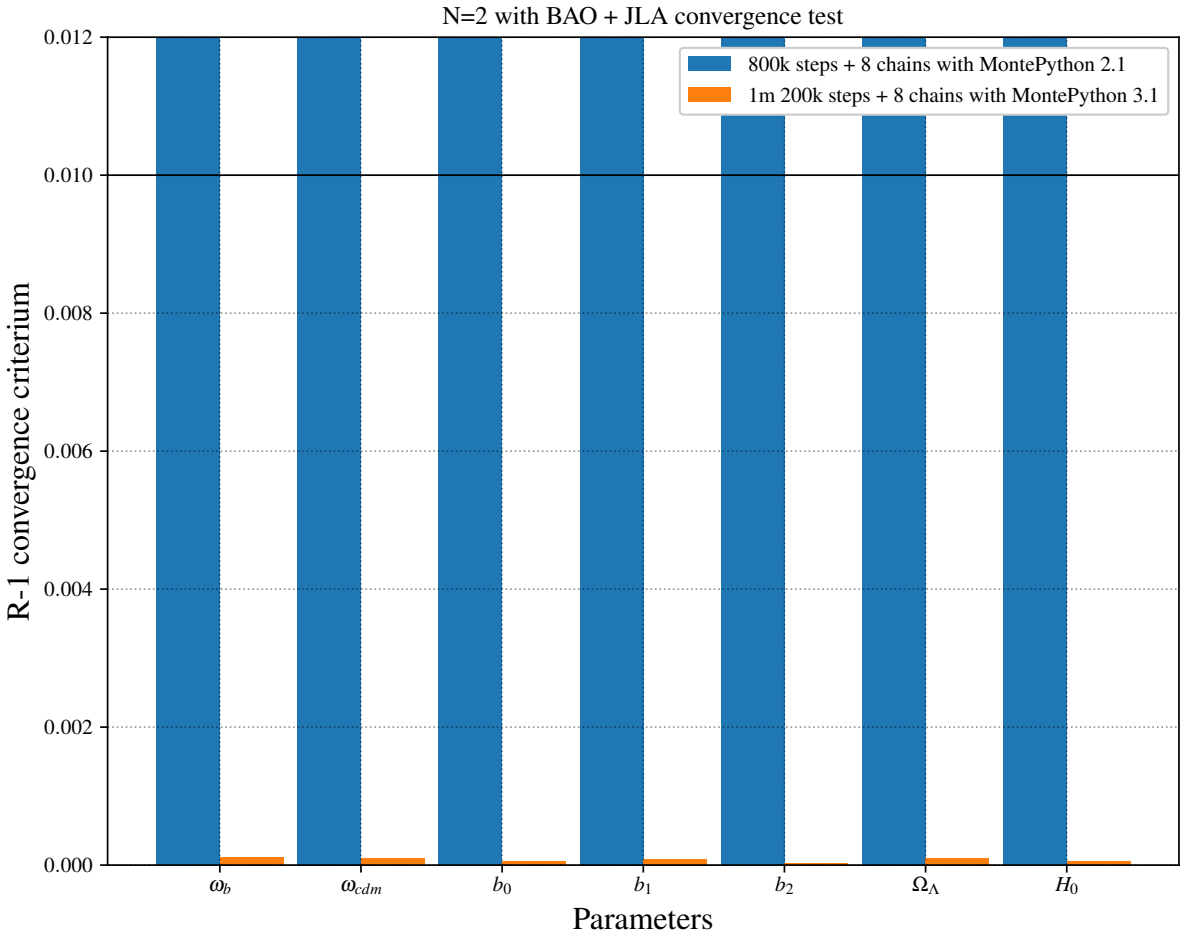
$-\ln\mathcal{L}_{\min} = 342.752$, minimum $\chi^2 = 685.5$

Param	best-fit	mean$\pm\sigma$	95% lower	95% upper
$100\ \omega_b$	2.248	$2.24^{+0.018}_{-0.018}$	2.204	2.275
ω_{cdm}	0.1189	$0.1191^{+0.0019}_{-0.0017}$	0.1155	0.1226
$10^{+9}A_s$	2.249	$2.238^{+0.072}_{-0.08}$	2.088	2.395
n_s	0.9707	$0.9702^{+0.0044}_{-0.0048}$	0.9612	0.9792
τ_{reio}	0.08929	$0.08632^{+0.018}_{-0.018}$	0.0506	0.1226
$b0_{fld}$	−1.118	$-1.053^{+0.16}_{-0.19}$	−1.399	−0.7057
$b1_{fld}$	−0.5685	-1.226^{+nan}_{nan}	*nan*	*nan*
$b2_{fld}$	−2.65	-2.05^{+nan}_{nan}	*nan*	*nan*
Ω_Λ	0.7002	$0.6987^{+0.0083}_{-0.0079}$	0.6825	0.7146
z_{reio}	10.88	$10.6^{+1.6}_{-1.5}$	7.417	13.71
$H0$	68.66	$68.54^{+0.8}_{-0.83}$	66.95	70.12
$\sigma8$	0.8548	$0.853^{+0.018}_{-0.019}$	0.817	0.8896

$-\ln\mathcal{L}_{\min} = 5987.24$, minimum $\chi^2 = 1.197e+04$


$w(N=1)$ BAO + JLA (19-3-1)
$w(N=1)$ PlanckTT + lowP + BAO + JLA (19-3-6)
$10^{-2}\omega_b$
ω_{cdm}
Ω_Λ
$b0_{fld}$
$b1_{fld}$
$H0$


$w(N=2)$ BAO + JLA (19-2-27)
$w(N=2)$ (PlanckTT + lowP) + BAO + JLA (19-1-3)
$10^{-2}\omega_b$
ω_{cdm}
Ω_Λ
$b0_{fld}$
$b1_{fld}$
$b2_{fld}$
$H0$


N=2 with BAO + JLA convergence test
800k steps + 8 chains with MontePython 2.1
1m 200k steps + 8 chains with MontePython 3.1
R-1 convergence criterium
0.012
0.010
0.008
0.006
0.004
0.002
0.000
ω_b
ω_{cdm}
b_0
b_1
b_2
Ω_Λ
H_0
Parameters